

CORRECTED VERSION

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
8 April 2004 (08.04.2004)

PCT

(10) International Publication Number  
WO 2004/029239 A1

(51) International Patent Classification<sup>7</sup>: C12N 9/88,  
G01N 33/68, C12N 9/10

(21) International Application Number:  
PCT/GB2003/004104

(22) International Filing Date:  
26 September 2003 (26.09.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
0222479.8 27 September 2002 (27.09.2002) GB

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(81) Designated States (national): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,  
CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,  
GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,  
KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK,

[Continued on next page]

(54) Title: CRYSTAL STRUCTURE OF CHORISMATE SYNTHASE AND USES THEREOF

(57) Abstract: The invention describes the identification of the struc-  
ture coordinates for the enzyme Chorismate Synthase. There is a com-  
puter programmed to produce a three-dimensional representation of a  
molecule or molecular complex, wherein the molecule or molecular  
complex comprises a binding domain defined by the structure coordi-  
nates of (a) Arg 39, His 110, Ser 132, Thr 136, Lys 254, Gly 297, Lys  
311, Thr 315, Arg 337 and Asp 339 ; or (b) Ser 9, His 10, Arg 39, Asp  
54, Arg 107, His 110, Ser 132, Ala 133, Arg 134, Thr 136, Arg 337 and  
Asp 339. 1, or where the molecular complex or binding domain has  
a root mean square deviation of conserved residue backbone atoms of  
less than 2A when superimposed on the relevant backbone atoms de-  
scribed by the structure coordinates of said amino acids.

ATOM	149	CA	GLY	A	20	-10.000	-3.288	-9.535	1.00	21.18	6	A	C
ATOM	150	C	GLY	A	20	-9.253	-4.488	-8.716	1.00	20.63	6	A	C
ATOM	151	O	GLY	A	20	-8.558	-4.753	-8.824	1.00	20.20	6	A	C
ATOM	152	H	GLY	A	20	-10.318	-3.422	-9.030	1.00	18.32	6	A	C
ATOM	153	CA	ILE	A	21	-9.813	-6.431	-7.927	1.00	19.14	6	A	C
ATOM	154	C	ILE	A	21	-9.048	-7.259	-7.432	1.00	18.63	6	A	C
ATOM	155	O	ILE	A	21	-8.243	-7.989	-7.589	1.00	18.46	6	A	C
ATOM	156	CB	ILE	A	21	-10.978	-6.803	-8.255	1.00	20.96	6	A	C
ATOM	157	CG	ILE	A	21	-10.744	-6.151	-7.523	1.00	19.51	6	A	C
ATOM	158	CD	ILE	A	21	-10.744	-6.151	-7.523	1.00	19.51	6	A	C
ATOM	159	CE	ILE	A	21	-9.749	-5.697	-7.285	1.00	17.88	6	A	C
ATOM	160	CG	ILE	A	21	-9.749	-5.697	-7.285	1.00	17.88	6	A	C
ATOM	161	CH	ILE	A	21	-9.749	-5.697	-7.285	1.00	17.88	6	A	C
ATOM	162	C	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	163	O	PRO	A	22	-10.588	-10.415	-9.725	1.00	19.45	6	A	C
ATOM	164	CB	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	165	CG	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	166	CD	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	167	CE	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	168	CF	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	169	CG	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	170	CH	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	171	CI	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	172	CO	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	173	CP	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	174	CQ	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	175	CR	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	176	CS	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	177	CT	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	178	CU	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	179	CV	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	180	CW	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	181	CX	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	182	CY	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	183	CZ	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	184	CA	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	185	CB	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	186	CC	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	187	CD	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	188	CE	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	189	CF	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	190	CG	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	191	CH	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	192	CI	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	193	CO	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	194	CP	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	195	CQ	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	196	CR	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	197	CS	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	198	CT	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	199	CU	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	200	CV	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	201	CW	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	202	CX	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	203	CY	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	204	CZ	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	205	CA	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	206	CB	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	207	CC	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	208	CD	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	209	CE	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	210	CF	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	211	CG	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	212	CH	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	213	CI	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	214	CO	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	215	CP	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	216	CQ	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	217	CR	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	218	CS	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	219	CT	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	220	CU	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	221	CV	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	222	CW	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	223	CX	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	224	CY	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	225	CZ	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	226	CA	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	227	CB	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	228	CC	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	229	CD	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	230	CE	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	231	CF	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	232	CG	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	233	CH	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	234	CI	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	235	CO	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	236	CP	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	237	CQ	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	238	CR	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	239	CS	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	240	CT	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	241	CU	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	242	CV	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	243	CW	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	244	CX	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	245	CY	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	246	CZ	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C
ATOM	247	CA	PRO	A	22	-10.027	-10.354	-9.770	1.00	20.49	6	A	C